

# ***Headquarters U.S. Air Force***

---

*Integrity - Service - Excellence*

## **Medical Services for Traumatic Brain Injury**



**U.S. AIR FORCE**

---

**Major Laura Baugh**

**SG30**

**Feb 2011**

**Version 1.5**



**U.S. AIR FORCE**

---

# *Overview*

- **Defining Traumatic Brain Injury (TBI)**
- **Incidence of TBI**
- **TBI Services in the AF**
- **Defining and Measuring Success of TBI programs**
- **Identifying Best Practices**
- **Implementation of DTM 09-033**



**U.S. AIR FORCE**

# ***Defining TBI***

- **A structural or physiologic disruption in brain function as a result of an external force**
  - **Blow or jolt to the head**
  - **Acceleration/deceleration movement**
  - **Other forces such as blast wave propagation**
- **Alteration or loss of conscious (AOC/LOC) at the time of injury**
- **Post traumatic amnesia may occur**
- **Duration of AOC/LOC, PTA, and findings on neuroimaging are used to determine severity of TBI**

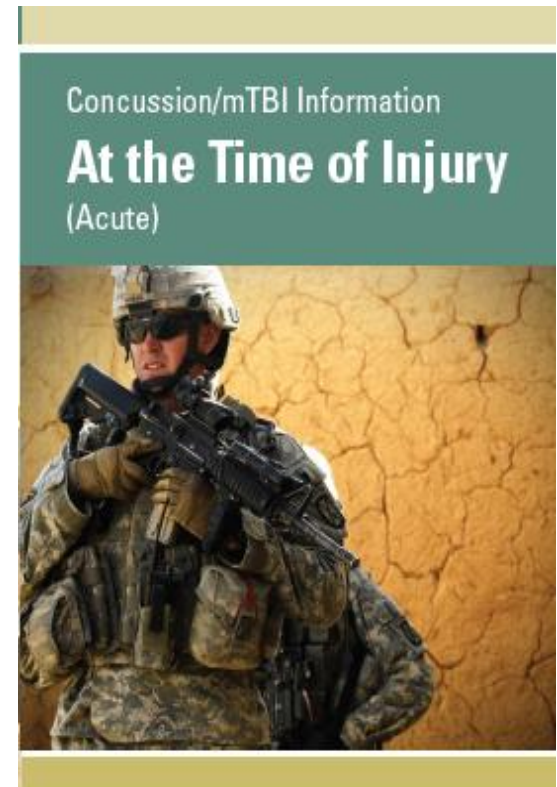




**U.S. AIR FORCE**

# ***Defining TBI***

- **Mild TBI is the same as concussion**
  - **LOC 0-30min, AOC up to 24hr, PTA 0-1day, normal neuroimaging**
  - **Common symptoms include difficulty thinking/concentrating, headache, sleep disturbance, irritability, slowed reaction time**
  - **The majority of people who sustain a concussion fully recovery within days to weeks**
  - **People who sustain multiple concussions may take longer to recover**

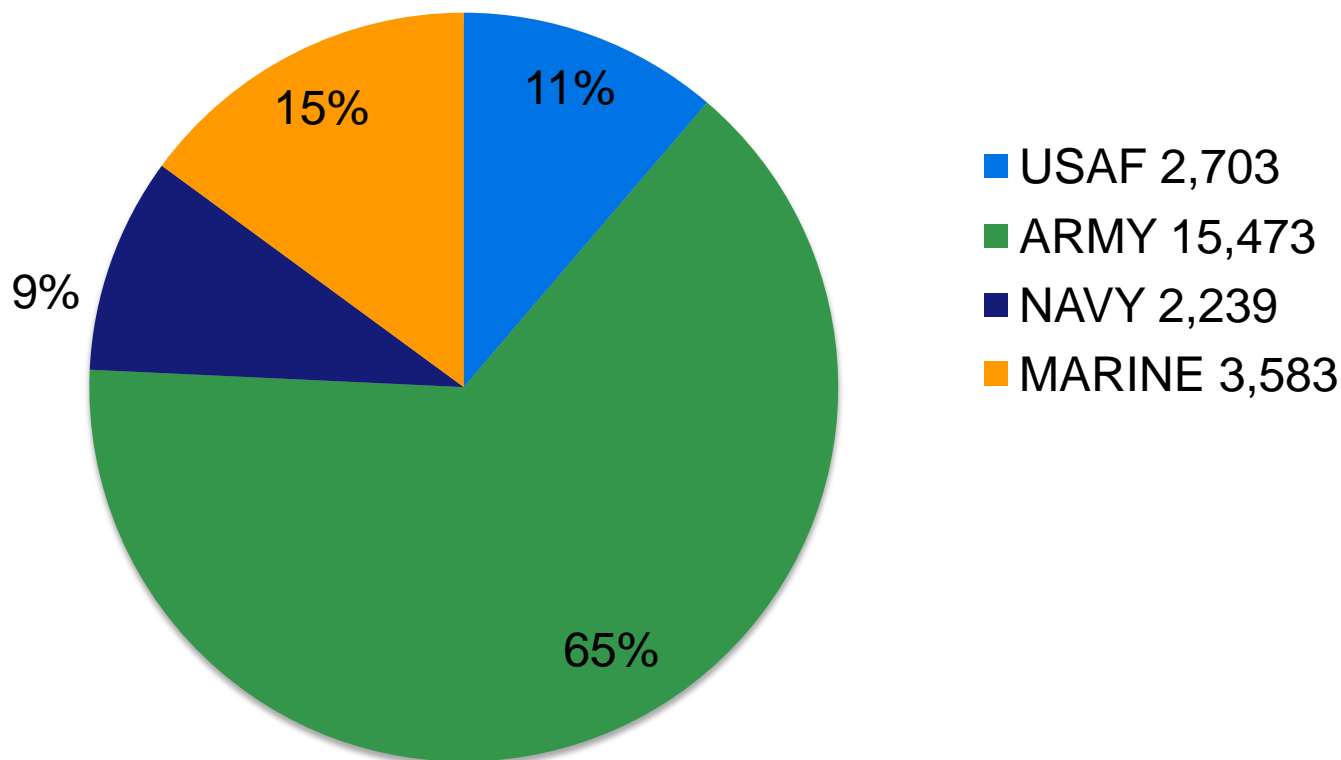




U.S. AIR FORCE

# *Deployed and Non-deployed TBI in the DoD 2010Q3*

## TBI Incidence



***The USAF accounted for 11% of all TBI including  
deployed and non-deployed cases***

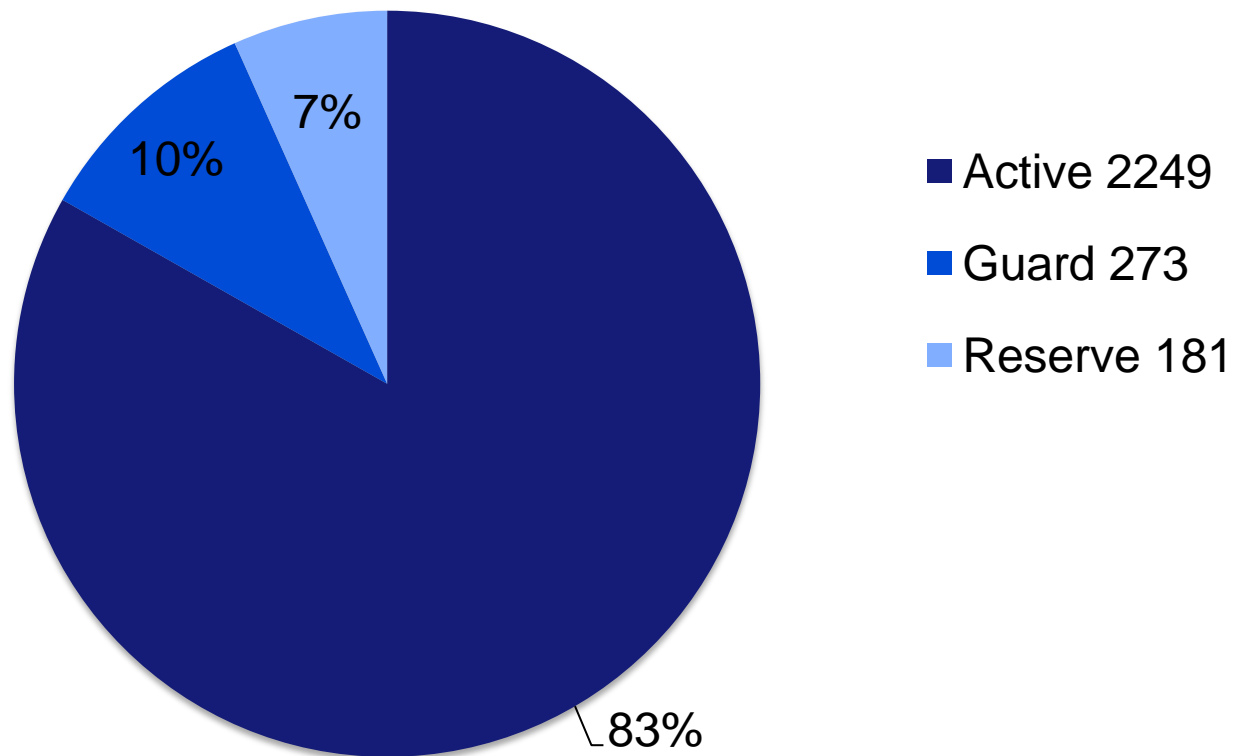


U.S. AIR FORCE

# *AF TBI by component*

## *2010Q3*

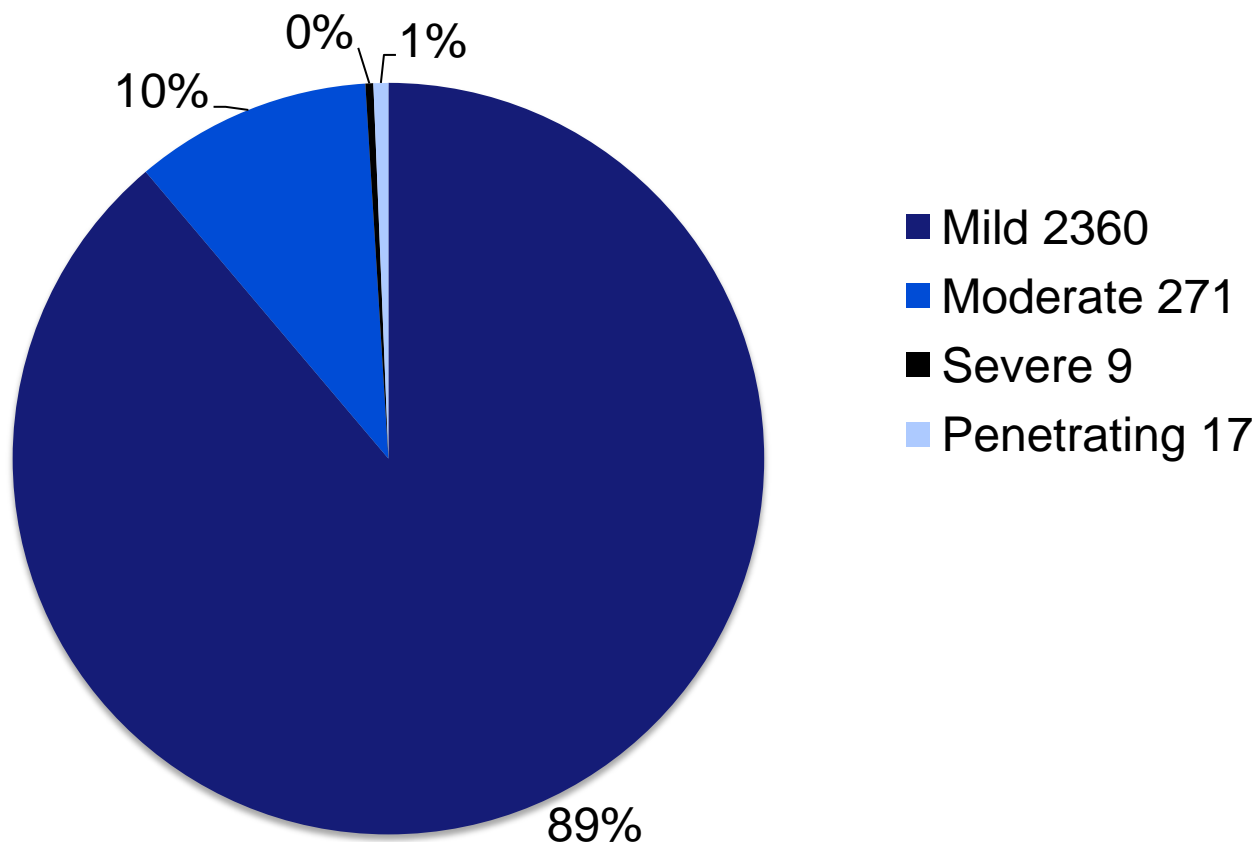
### TBI Incidence





U.S. AIR FORCE

# AF TBI Severity 2010Q3



***Most TBI in the AF is mild***

*Integrity - Service - Excellence*



**U.S. AIR FORCE**

# ***Approach to TBI Services***

- **The incidence of TBI in the AF is lower than in other services due to difference in mission**
- **Most TBI in the AF is mild**
- **Most who have mild TBI recovery over days to weeks**
- **Goal is to identify Airman with persistent post-concussion symptoms**
- **Goal is to educate primary care providers across the AFMS on TBI diagnosis, management, and resources**







**U.S. AIR FORCE**

# ***Screening Wounded Warriors***

---

- **Landstuhl Regional Medical Center**
  - **All Warfighters medically evacuated from theater to LRMC undergo TBI screening regardless of injury for which they were evacuated**



---

*Integrity - Service - Excellence*



U.S. AIR FORCE

# ***Screening All Recently Deployed Airmen***

---

- **Post Deployment Health Assessment (PDHA)**
  - **TBI screening questions added in Jan 2008**
- **Post Deployment Health Re-Assessment (PDHRA)**
  - **Given 3-6 months after redeployment**
  - **Same TBI screening questions**
- **Deployment Transition Center (DTC)**
  - **Opportunity to screen high risk career fields**



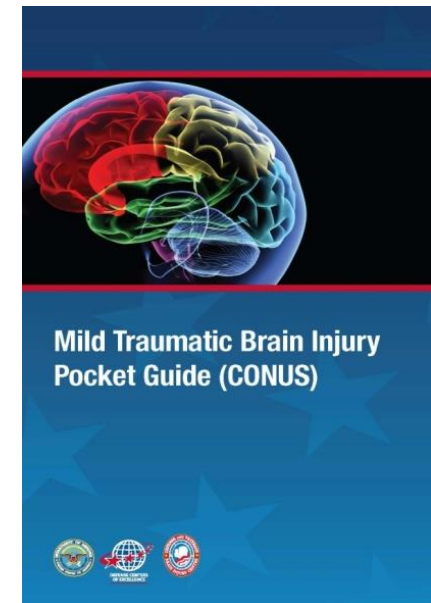


**U.S. AIR FORCE**

---

# ***Training***

- All clinical medics trained on current concussion management guidelines in deployed setting
- TBI pocket guides distributed to >1500 providers in AFMS
- TBI info in Squadron and Wing CC courses
- New section on TBI in Leadership Guide
- TBI section added to self aid buddy care
- [TraumaticbraininjuryAtoZ.org](http://TraumaticbraininjuryAtoZ.org)





**U.S. AIR FORCE**

# ***Clinics***

- **TBI Clinic in theater**
  - **332 EMDG, Balad**
- **Two joint TBI programs in CONUS**
  - **Joint Base Elmendorf-Richardson**
  - **San Antonio Military Health System**





**U.S. AIR FORCE**

# ***TBI Clinic Balad***

## **332 EMDG, Balad**

- **Co-located with mental health**
- **One provider (psychologist), one tech**
- **Provides initial eval and education**
- **6 laptops for post-injury ANAM testing as indicated**
- **>75% of patients are Army**







**U.S. AIR FORCE**

# ***TBI Clinic Elmendorf***

## **Elmendorf-Richardson**

- **Multidisciplinary mTBI clinic started in March 2009**
- **Neurology, neuropsychology, sleep clinic, pain clinic, OT/PT, Speech Pathology, Audiology, Optometry, Mental Health**
- **Support groups for children, spouses and service members**
- **Stress management, sleep hygiene, anger management, and healthy thinking**
- **Low stress, low stimulus environment; relaxation/massage chairs in the waiting area, filtered lights**



*Integrity - Service - Excellence*



**U.S. AIR FORCE**

# ***TBI Clinic Elmendorf***

---

## **Elmendorf-Richardson**

- **48 active mTBI patients**
  - **44 Army**
  - **3 USAF**
  - **1 Retired Army**
- **36 (75%) of the active TBI patients have comorbid diagnosis of PTSD**
- **Weekly joint staffing of patients with Fort Richardson staff and all specialty providers involved with the pts care**



**U.S. AIR FORCE**

# ***TBI Clinic San Antonio***

## **San Antonio Military Medical Center**

- **Program started August 2007**
- **Aug 2007-July 2010: 1657 consults**
  - **85% Army**
  - **3% Marine**
  - **3% Air Force**
- **62% mTBI**
- **51% blast etiology**







**U.S. AIR FORCE**

# ***Defining and Measuring Success***

---

- **Defining Success of TBI Services**
  - **Early and appropriate evaluation, diagnosis, and treatment following a potentially concussive event**
- **Measuring Success of TBI Services**
  - **Resolution/control of symptoms**
  - **Return to duty**
  - **Medical evaluation board statistics**

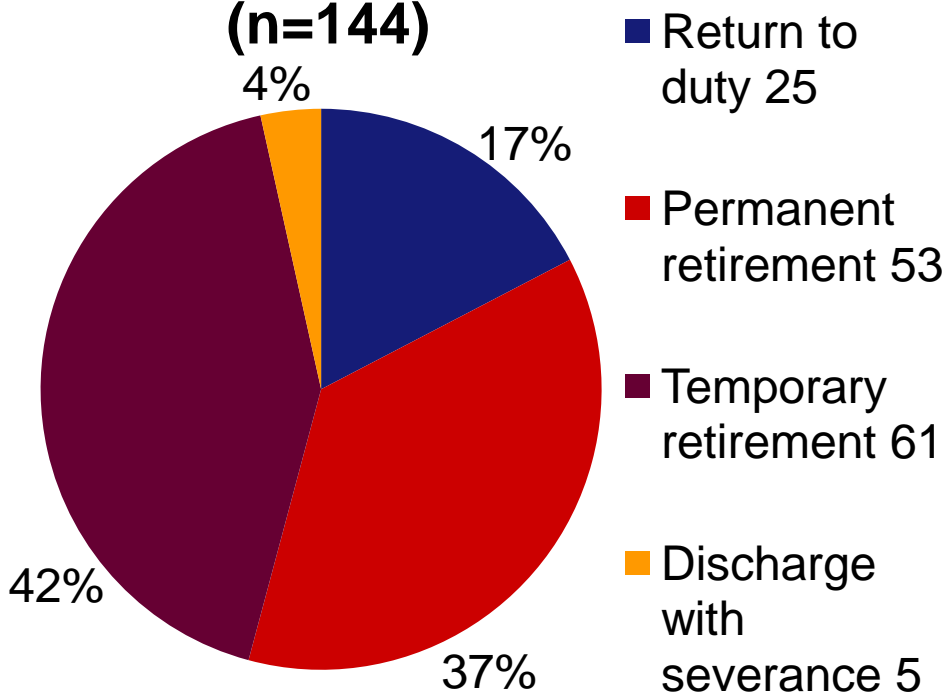


U.S. AIR FORCE

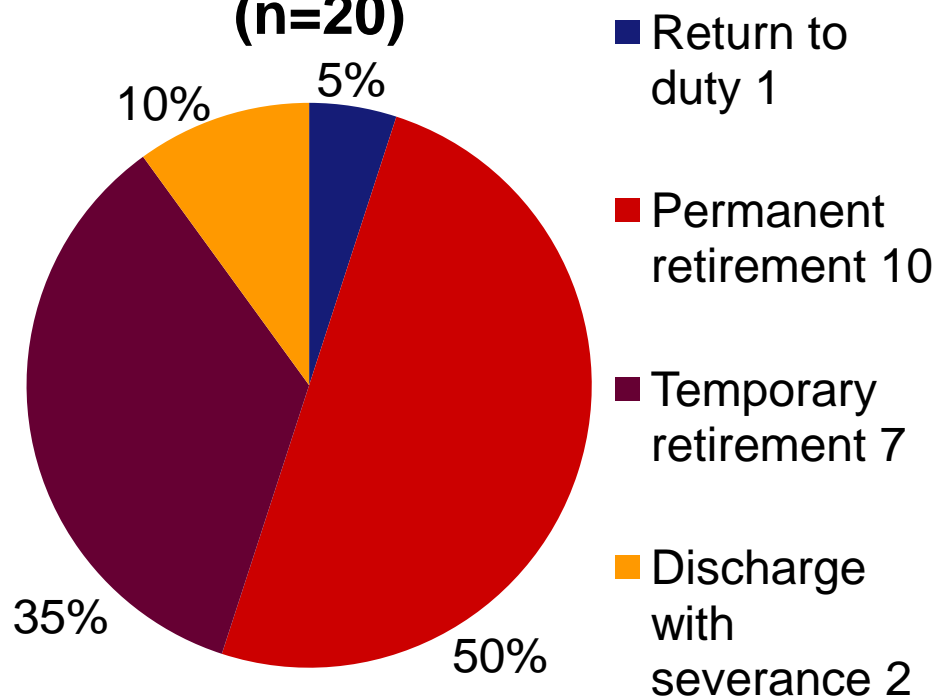
# *Disposition of Airmen with TBI who underwent MEB*

- 164 MEBs for TBI 2001- Feb 2011
- 25,842 total cases of TBI diagnosed 2001-2010Q3

## **Non-combat related (n=144)**



## **Combat Related (n=20)**

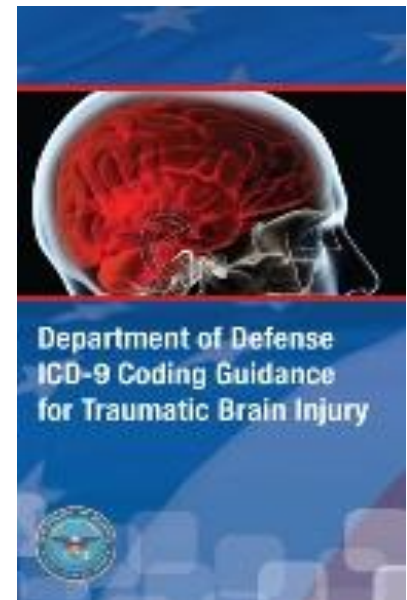




**U.S. AIR FORCE**

# ***Identifying Best Practices***

- **Quad Service TBI working group**
  - **Defense Center of Excellence (DCoE), DoD/VA Brain Injury Center (DBVIC), AF, Army, Navy, and USMC, National Intrepid Center of Excellence (NICoE)**
  - **VA/DoD clinical practice guidelines**
  - **Tools for providers and resources for SM and their families**
  - **Constant review of current research to ensure implementation of emerging best practices**





# ***Implementation of DTM 09-033***

**U.S. AIR FORCE**

---

- **Directive-Type Memorandum (DTM) 09-033: 21 JUN 2010**
  - **Policy Guidance for the Management of Concussion/Mild Traumatic Brain Injury in the Deployed Setting**
- **CENTCOM FRAGO 09-1656: 13 JUL 2010**
  - **MOD 1: 13 DEC 2010**
- **USAFCENT FRAGO F10-038: 3 NOV 2010**
- **AF Guidance Memorandum 44-01: 16 FEB 2011**
- **AFI 44-174**
  - **New AFI written and being coordinated for publication**

**“TRUSTED CARE ANYWHERE”**

